

Serial No.: 10/502,042
Atty. Docket No.: P69751US0

IN THE CLAIMS:

Please cancel and add claims as follows:

Claims 1-6 (Canceled).

7. (New) A process for correcting a longitudinal registration error of a rotary printing press having a plurality of inking systems, at least two rollers arranged adjacent one another and directly involved in the printing process of an inking system, and a control unit, said rollers having respective axes of rotation joined by a connecting line, and at least one of said rollers having a printing plate, said process comprising:

adjusting, by said control unit, a desired print line of the printing plate on a material web lying on one of the two rollers by controlling a drive of the two rollers so that, at least during a period of time, said rollers have different circumferential speeds, said step of adjusting by said control unit including,

taking into account, by the control unit, a shift of the actual, effective print line on the circumference of both rollers arising as a consequence of an adjustment movement of one of the two rollers along an adjustment axis that does not run coincident with the connecting line of

said axes of rotation of said two rollers but is at an angle thereto; and

determining, by the control unit, values for correcting any longitudinal registration error in said print line from relative positions of the two rollers and the inking system, and said angle between the connecting line of the axes of rotation and the adjustment axis.

8. (New) The process according to claim 7, wherein when said step of adjusting is performed, said axes of rotation are generally parallel with one another and said connecting line extends generally perpendicularly to said axes of rotation.

9. (New) The process according to claim 7, wherein in determining the correction values, the control unit accesses correction values on a storage device in which said correction values are plotted as a function of the relative roller positions.

10. (New) The process according to claim 7, wherein in determining the correction values, the control unit accesses correction values on a computer unit that determines said

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correction values from the relative positions of the two rollers and the angle between the connecting line of the axes of rotation and the adjustment axis using a computational algorithm.

11. (New) The process according to claim 7, wherein the control unit first performs a preregistration by evaluating the relative positions of components of the print images that are plotted with optical sensors.

12. (New) The process according to claim 11, wherein said step of performing a preregistration is performed during a printing process.

13. (New) The process according to claim 7, wherein the control unit performs, at regular intervals of time, a registration correction by evaluating the relative positions of components of the print images that are plotted with optical sensors.

14. (New) A rotary printing press for a printing process on a material web, comprising:

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at least two rollers directly involved in the printing process, said rollers having respective axes of rotation joined by a connecting line, at least one of said rollers having a printing plate and an associated inking system;

at least one drive unit associated with said rollers;
and

a control unit configured to adjust a desired print line of the printing plate on the material web lying on one of the two rollers by controlling said at least one drive unit so that said rollers have, at least during a period of time, different circumferential speeds;

said control unit further being configured to take into account, in performing said adjustment, a shift of an actual, effective print line on a circumference of said rollers due to an adjustment movement of one of the two rollers along an adjustment axis that does not run coincident with said connecting line but is at an angle thereto, and said control unit being still further configured to determine values for correcting any longitudinal registration error in said actual print line from relative positions of the two rollers and the associated inking system and the angle between the connecting line of the roller axes of rotation and the adjustment axis.

15. (New) The rotary printing press according to claim 14, wherein said axes of rotation are generally parallel with one another and said connecting line extends generally perpendicularly to said axes of rotation.

16. (New) The rotary printing press according to claim 14, wherein in determining the correction values, the control unit accesses correction values on a storage device in which said correction values are plotted as a function of the relative roller positions.

17. (New) The rotary printing press according to claim 14, wherein in determining the correction values, the control unit accesses correction values on a computer unit that determines said correction values from the relative positions of the two rollers and the angle between the connecting line of the axes of rotation and the adjustment axis using a computational algorithm.

18. (New) The rotary printing press according to claim 14, wherein the control unit first performs a preregistration by evaluating the relative positions of components of the print images that are plotted with optical sensors.

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19. (New) The rotary printing press according to claim 14, wherein the control unit performs, at regular intervals of time, a registration correction by evaluating the relative positions of components of the print images that are plotted with optical sensors.

20. (New) A rotary printing press for a printing process on a material web, comprising:

an impression roller;

at least one printing plate roller with an associated inking system, said printing plate roller being positioned immediately adjacent said impression roller so that an effective print line is formed on a circumference of said rollers, axes of rotation of said rollers being joined by a connecting line; and

a control unit configured to adjust the print line of the printing plate roller on the material web lying on one of the rollers to correct a longitudinal error in the printing process by controlling a circumferential speed of said rollers so that, at least during a period of time, said rollers have different circumferential speeds;

said control unit further being configured to take into account, in performing said adjustment, a shift of the effective

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print line due to an adjustment movement of one of the two rollers along an adjustment axis that does not run coincident with said connecting line, and said control unit being still further configured to determine values for correcting any longitudinal registration error in said print line from the relative positions of the two rollers and the inking system and an angle between the connecting line of the roller axes of rotation and the adjustment axis.

21. (New) The rotary printing press according to claim 20, wherein said axes of rotation are generally parallel with one another and said connecting line extends generally perpendicularly to said axes of rotation.

22. (New) The rotary printing press according to claim 20, wherein in determining the correction values, the control unit accesses correction values on a storage device in which said correction values are plotted as a function of the relative roller positions.

23. (New) The rotary printing press according to claim 20, wherein in determining the correction values, the control unit

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accesses correction values on a computer unit that determines said correction values from the relative positions of the two rollers and the angle between the connecting line of the axes of rotation and the adjustment axis using a computational algorithm.

24. (New) The rotary printing press according to claim 20, wherein the control unit first performs a preregistration by evaluating the relative positions of components of the print images that are plotted with optical sensors.

25. (New) The rotary printing press according to claim 20, wherein the control unit performs, at regular intervals of time, a registration correction by evaluating the relative positions of components of the print images that are plotted with optical sensors.